

WHAT IS CLAIMED IS:

1. A method for automatic amplification adjustment in a hearing aid device, comprising:
  - transducing an acoustic input signal into an electrical signal;
  - determining a speech signal level and a noise signal level in a plurality of frequency bands of the electrical signal;
  - determining parameters for automatic adjustment of an amplification of the electrical signal depending on the speech signal level, the noise signal level, and frequency of the electrical signal dynamically.
2. The method according to claim 1, wherein determining parameters comprises applying a loudness model.
3. The method according to claim 1, wherein determining parameters comprises applying a speech comprehensibility model.
4. The method according to claim 1, further comprising:
  - determining an overall signal level of the electrical signal in the individual frequency bands and a total signal level of the electrical signal over the entire bandwidth of the electrical input signal;
  - wherein
  - determining parameters further includes considering the total signal level when performing the automatic adjustment of the amplification.
5. The method according to claim 1, wherein the determining of the speech and noise signal levels includes performing a level evaluation.

6. The method according to claim 1, wherein the determining of the parameters further includes utilizing individual audiometric data of a hearing aid user.
7. A hearing aid device, comprising:
- a filter bank comprising an electrical signal input configured to split an electrical signal into frequency bands, the filter bank comprising an output for a signal in each frequency band;
  - one or more level detecting devices comprising an input that is connected to the filter bank output, and an output, the level detecting devices being configured to determine a speech signal level and a noise signal level in the frequency bands; and
  - a parameter determining device comprising an input connected to the output of the level detecting devices, the parameter determining device being configured to determine parameters to automatically adjust an amplification of the electrical signal dependent on the speech signal level and the noise signal level dynamically.
8. The hearing aid device according to claim 7, wherein the parameter determining device further comprises a loudness model and a speech comprehensibility model that are configured to assist in the parameter determination.
9. The hearing aid device according to claim 8, wherein the parameter determining device further comprises an individual audiometric data input via which audiometric data are supplied to the parameter determining device.
10. The hearing aid device according to claim 7, further comprising a synthesis device having one or more inputs that is connected respectively to one or more outputs of the parameter determining device, the synthesis device further comprising

an output for providing an electrical output signal based on one or more frequency bands.

11. The device according to claim 10, further comprising one or more multipliers located between the one or more inputs of the synthesis device and the one or more outputs of the parameter determining device.